

REMARKS

The Office Action has been carefully reviewed in light of the cited references and the Examiner's comments, and accordingly, claims 1-20 have been replaced by new claims 21-26 to distinguish Applicants' invention more clearly and to place these claims in condition for allowance. Applicants acknowledge the allowability of claims 7 and 16.

In reference to new claim 21 which is directed to Applicants' hydraulic line assembly as disclosed in connection with FIGS. 17-19 and which includes an elongated multi-layer high pressure flexible hose (30) having a longitudinally uniform inner diameter, an elongated bendable metal tube (230) having a longitudinally uniform outer diameter greater than the inner diameter of the hose, the metal tube having a reduced integral tubular end portion (241) with an outer diameter substantially the same as the inner diameter of the hose and extending into an end portion of the hose, a drawn sheet metal tubular collar (228) having a substantially uniform wall thickness and including a tubular first end portion (242) crimped (244) radially inwardly against the end portion of the hose and positively compressing the end portion of the hose against the end portion of the tube, the drawn sheet metal tubular collar including an opposite tubular second end portion (252) integral with the tubular first end portion, and the tubular second end portion of the collar having a crimped section (262) crimped radially inwardly against a radially inwardly reduced neck portion (258) of the tube at a location spaced axially from the reduced tubular end portion (241) of the tube (230).

Applicants have carefully reviewed the disclosures of the cited references, including the disclosure of Soles et al '394 and Nicol '091, and do not find any suggestion or teaching of a hydraulic line assembly as set forth above in new claim 21. Applicants' assembly forms a positive, economical and dependable coupling between a flexible hose and a bendable metal tube without requiring the operation of compressing the metal tube axially to form outwardly projecting circumferential

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bumps such as the bumps 42 and 44 disclosed in FIG 4 of Soles et al '394. Also neither Soles et al '394 nor Nicol '091 discloses or suggests Applicants' drawn sheet metal tubular collar which has a crimped section crimped radially inwardly against a radially inwardly reduced neck portion of the metal tube at a location spaced axially from a reduced tubular end portion of the tube. The assembly disclosed in FIG. 4 of Soles et al '394 relies on the outwardly projecting stop bump 42 to provide axial or tensile strength to the assembly, and the crimp portions 62 are used to form a fluid-tight seal between the tubular portion 58 and the plastic coated metal tube 34 and do not deform the metal tube 34.

In reference to new claim 22, neither Soles et al '394 nor Nicol '091 suggests Applicants' collar wherein the crimped section 262 of the tubular second end portion 252 and the radially reduced neck portion 258 of the tube 230 have peripherally spaced mating flat surfaces, as Applicants show in FIG. 18. Moreover, none of the references teaches Applicants' crimped section 262 and neck portion 258 having a substantially square cross-sectional configuration, as set forth in claim 23. In reference to new claim 24, the references also fail to disclose or suggest Applicants' circumferentially spaced and inwardly projecting integral dimples 254 spaced axially from the crimped section 262 and engaging a shoulder on the metal tube at the inner end of the reduced tubular end portion 241 of the metal tube. The assembly of Soles et al '394 requires the outwardly projecting circumferential stop bump 42 and further requires the tubular fitting 36 to be assembled either before the stop bump 42 is formed or from the opposite end of the metal tube 34 which may have substantial length.

New claim 25 is a combination of original claim 10 and allowable dependent claim 16 and should therefore be in condition for allowance. New claim 26 is a combination of claim 1 and allowable claim 8 from Applicants' abandoned parent application Serial 09/760,355, and should also be in condition for allowance. This latter claim 26 includes Applicants' annular spring retaining washer 136 disclosed

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in connection with the assembly shown in FIG. 10 for securing the collar to the metal tube, and the structure is not suggested by any of the references.

In view of the foregoing, Applicants believe that each of new claims 21 - 26 defines a flexible hydraulic line assembly which is clearly distinguished from the references. Accordingly, Applicants believe that these claims are in condition for allowance, and respectfully request that this application be passed to issue.

Respectfully submitted,

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A handwritten signature in dark ink, appearing to read 'Alan Meckstroth', written over the printed name.

Alan F. Meckstroth

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